

AMENDMENTS TO THE CLAIMS

1. (Currently amended) An oligonucleotide-immobilized substrate for detecting presence or absence of methylation of C in a sample DNA comprising a target sequence, comprising multiple pairs of capture oligonucleotides wherein the capture ~~oligonucleotides~~ oligonucleotide pairs comprise an oligonucleotide comprising a nucleotide sequence complementary to or identical to a nucleotide sequence corresponding to the target sequence in which all of C's other than C's in all CpG dinucleotides (C that can be methylated and G on the 3' side of the C) are replaced with T's and an oligonucleotide comprising a nucleotide sequence complementary to or identical to a nucleotide sequence corresponding to the target sequence in which all of C's are replaced with T's immobilized thereon, wherein

the target sequence contains CpG dinucleotides at a plurality of sites,

the capture oligonucleotides correspond to a plurality of adjacent CpG islands,

and

the presence or absence of methylation is detected based on hybridization of the capture oligonucleotides with the sample DNA in which non-methylated C's have been converted into U's by deamination of an amplification product thereof.

2. (Original) The oligonucleotide-immobilized substrate according to claim 1, wherein the capture oligonucleotides are immobilized as dots on a base material, and each dot has an occupied area of 0.1 cm² or less.

3. (Previously presented) The oligonucleotide-immobilized substrate according to claim 1, wherein the capture oligonucleotides are oligonucleotides of 100-mer or less.

4. (Previously presented) The oligonucleotide-immobilized substrate according to claim 1, wherein the capture oligonucleotides are immobilized via carbodiimide groups.

5. (Currently amended) A method for detecting presence or absence of methylation of C's in CpG dinucleotides in a sample DNA containing a target sequence containing CpG dinucleotides, comprising:

providing multiple pairs of capture oligonucleotides immobilized on a base material according to claim 1, wherein the capture ~~oligonucleotides~~ oligonucleotide pairs

comprise an oligonucleotide ~~having~~comprising a nucleotide sequence complementary to or identical to a nucleotide sequence corresponding to the target sequence in which all of C's other than C's in the CpG dinucleotides are replaced with T's and an oligonucleotide ~~having~~comprising a nucleotide sequence complementary to or identical to a nucleotide sequence corresponding to the target sequence in which all of C's are replaced with T's, and wherein the capture oligonucleotides correspond to a plurality of adjacent CpG islands;

converting C's in the sample DNA into U's by deamination;

hybridizing the capture oligonucleotides with the deaminated sample DNA or an amplification product thereof, and

detecting the presence or absence of methylation based on the result of the hybridization.

6. (Withdrawn) The method according to claim 5, wherein the non-methylated C's have been deaminated by treatment with sodium bisulfite.

7. (Previously presented) The oligonucleotide-immobilized substrate according to claim 2, wherein the capture oligonucleotides are oligonucleotides of 100-mer or less.

8. (New) The oligonucleotide-immobilized substrate according to claim 1, wherein the capture oligonucleotides are immobilized directly on a base material.